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| APPLICATION NO.                 | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------|-------------|----------------------|---------------------|------------------|
| 10/686,506                      | 10/15/2003  | Michael A. Milligan  | 0275R-000799        | 3538             |
| 27572                           | 7590        | 01/05/2006           | EXAMINER            |                  |
| HARNES, DICKEY & PIERCE, P.L.C. |             |                      | TILL, TERRENCE R    |                  |
| P.O. BOX 828                    |             |                      | ART UNIT            |                  |
| BLOOMFIELD HILLS, MI 48303      |             |                      | PAPER NUMBER        |                  |
|                                 |             |                      | 1744                |                  |
| DATE MAILED: 01/05/2006         |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/686,506

Applicant(s)

MILLIGAN ET AL.

Examiner

Terrence R. Till

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-21 and 32-51 is/are pending in the application.
- 4a) Of the above claim(s) 20,21,35 and 36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-19,32-34 and 37-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f)..
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/04, 4/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's response to the Election of Species, filed 12/5/05, has been noted. Upon examination of the application, it was discovered that there were a few non-generic claims directed to certain species. The examiner called applicant's representative, M. Zalobsky, on 12/29/05 to inform him of this discovery. The examiner then requested to give a listing of claims readable on the elected species. Those claims readable were 17-19, 32-34 and 37-51. Claims 20, 21, 35 and 36 are withdrawn to a non-elected species.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "30" and "70" have both been used to designate the motor. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

*Specification*

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 17, 18, 32-34, 37-39, 42-44 and 49-51 are rejected under 35 U.S.C. 102(a) as being anticipated by Japanese patent to Yamamoto.

6. The Japanese patent to Yamamoto discloses a hand-held portable vacuum comprising a housing having a handle 8, defined by an aperture in the body, between front and rear ends; a dirt cup 10 having an inlet port 15 and defining a container for storage of dirt and debris therein, the dirt cup being removably attached to the housing; an impeller 9 at least partially disposed in the housing, the impeller being operable for generating an air flow that flows through the inlet port; a filter 11,12 disposed between the impeller and the inlet port; and means for swirling the air flow (see figures 2, 4 and 6-11) about an interior of the dirt cup. Yamamoto also discloses the swirling means includes a flow deflector, or elbow, 20 associated with the inlet port of the dirt

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cup. The elbow is fixedly mounted in the container and attached to a rear end of the inlet port.

The dirt cup is considered to have a substantially smooth interior surface. With respect to method claims 17, 18, 49 and 51, Yamamoto is considered to inherently disclose the method steps of rotating the impeller to generate the dirt and debris laden air flow; and directing the dirt and debris laden air flow in a direction toward the housing and to a side of an outlet of the inlet port; thus swirling the airflow transverse to the filter.

7. Claims 17, 18, 32-34, 37, 38, 42, 43 and 49-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Maruyama et al.

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8. The publication to Maruyama et al. discloses a hand-held portable vacuum comprising a housing 1 having a handle 26a, defined by an aperture in the body, between front and rear ends; a dirt cup 11 having an inlet port 35 and defining a container 11 for storage of dirt and debris therein, the dirt cup being removably attached to the housing; an impeller 3 at least partially disposed in the housing, the impeller being operable for generating an air flow that flows through the inlet port; a filter 12 disposed between the impeller and the inlet port; and means for swirling the air flow through tube 32 about an interior of the dirt cup. Maruyama et al. also disclose the swirling means includes a flow deflector, or elbow, 32 associated with the inlet port of the dirt cup. The dirt cup is considered to have a substantially smooth interior surface. With respect to method claims 17, 18, 49 and 51, Maruyama et al. is considered to inherently disclose the method steps of rotating the impeller to generate the dirt and debris laden air flow; and directing the dirt and debris laden air flow in a direction toward the housing and to a side of an outlet of the inlet port; thus swirling the airflow transverse to the filter.

9. Claims 17-19, 32-34, 37, 40-43 and 48-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Steiner et al.

10. The patent to Steiner et al. discloses a hand-held portable vacuum comprising a housing 11 having a handle, defined by an aperture in the body, between front and rear ends; a dirt cup 25 having an inlet port 43 and defining a container for storage of dirt and debris therein, the dirt cup being removably attached to the housing; an impeller (attached to motor 13) at least partially disposed in the housing, the impeller being operable for generating an air flow that flows through the inlet port; a filter 24 disposed between the impeller and the inlet port; and means for swirling the air flow 51 (see column 2, lines 50-60) about an interior of the dirt cup. Steiner et al. also

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disclose the swirling means includes a flow deflector, or elbow, 51 associated with the inlet port of the dirt cup. The elbow is fixedly mounted in the container and faces towards the bottom side of the dirt cup and rearwardly towards the housing (see figures 3 and 8). The dirt cup is considered to have a substantially smooth interior surface. With respect to method claims 17, 18, 49 and 51, Steiner et al. is considered to inherently disclose the method steps of rotating the impeller to generate the dirt and debris laden air flow; and directing the dirt and debris laden air flow in a direction toward the housing and to a side of an outlet of the inlet port; thus swirling the airflow transverse to the filter.

11. Claims 17-19, 32-34, 37-39, 41-47 and 49-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese patent to Ito et al.

12. The Japanese patent to Ito et al. discloses a hand-held portable vacuum comprising a housing 10 having a handle 13, defined by an aperture in the body, between front and rear ends; a dirt cup 19 having an inlet port 27a, 28 and defining a container for storage of dirt and debris therein, the dirt cup being removably attached to the housing; an impeller 11 at least partially disposed in the housing, the impeller being operable for generating an air flow that flows through the inlet port; a filter 20 disposed between the impeller and the inlet port; and means for swirling the air flow 21, 27 about an interior of the dirt cup. Ito et al. also disclose the swirling means includes a flow deflector, or elbow, 21 associated with the inlet port of the dirt cup. The dirt cup is considered to have a substantially smooth interior surface. Ito et al. also disclose the elbow is coupled to a rear end of the inlet port (see figures 2-4) and the elbow includes an attachment portion and wherein one of the attachment portion and the inlet port is received into the other one of the attachment portion and the inlet port. Also, Ito et al. disclose the attachment portion and

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the inlet port are frictionally engaged to one another. and the elbow is removably coupled to the inlet port. With respect to method claims 17, 18, 49 and 51, Ito et al. is considered to inherently disclose the method steps of rotating the impeller to generate the dirt and debris laden air flow; and directing the dirt and debris laden air flow in a direction toward the housing and to a side of an outlet of the inlet port; thus swirling the airflow transverse to the filter.

### *Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patent to Lee discloses a typical hand-held vacuum cleaner. The patent to Reed discloses an extractor-type cleaner with cyclonic airflow. The Japanese patent to Ohara discloses a hand-held cyclonic vacuum cleaner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrence R. Till whose telephone number is (571) 272-1280. The examiner can normally be reached on Mon. through Thurs. and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sun U. Kim can be reached on (571) 272-1142. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

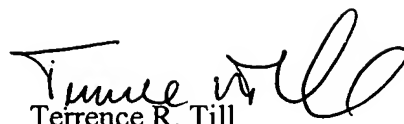
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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A handwritten signature in black ink, appearing to read "Terrence R. Till". The signature is stylized with a large, looped "T" and a cursive "R".

Terrence R. Till  
Primary Examiner  
Art Unit 1744

trt